The Influence of Safety Leadership, OHS Work Programs, And Risk Management on Safety Leadership at PT.XYZ

Rochman[1], Rosalendro Eddy Nugroho[2]
Master of Management, Economic and Business Faculty
Mercubuana University, Indonesia

Abstract:- The achievement of the lagging accident rate indicator, namely the Incident Frequency Rate (IFR) of PT. XYZ in 2021, is 6.3, where the target IFR is not achieved < 3.0, then there are several variables that affect the IFR achievement in 2021. This study aims to determine the influence of variables between safety leadership, OHS (occupational health and safety) work program, risk management on safety performance at PT. XYZ. Respondents from this research conducted at PT. XYZ as many as 100 respondents. Methods of collecting data using a survey, with the research instrument is a questionnaire. The data analysis method used SPSS version 26. The results of the study found that safety leadership, OHS work programs, and risk management had a positive and significant influence on safety performance at PT.XYZ. It can be concluded, the better the implementation of safety leadership, OHS work programs and risk management carried out by the company, the better the safety performance produced in the company.

Keywords:- Safety Leadership, OHS Work Program, Risk Management, Safety Performance, Multiple Linear Regression (SPSS)

I. INTRODUCTION

Phenomenon of Problems related to PT. XYZ's HSE Objective Target Program (OTP) in 2021 was not achieved because the IFR (Incident Frequency Index) number was 6.3, exceeding the target of 3.0 as shown below.
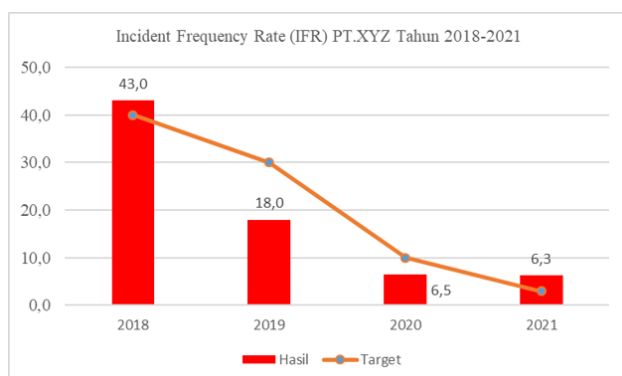

Fig 1:- Data Incident Frequency Rate at PT.XYZ
Source: PT. XYZ 2021 data

Some of the identified factors related to not achieving the IFR according to the target are:
1. The involvement of the management level that shows the Safety Leadership is still below the target set by the company (at least 5%).
2. Achievement of the OHS Work Program related to the target of leading (proactive) program indicators in the company is not achieved (below 98 %)
3. There are still high-risk activities that require a STOP work activity (SWA) card to be issued.

Some of the journals that take into account the phenomenon of the problem:
- Yovitaat al.(2017): Safety Leadership has a positive influence on safety performance, so the strength and weakness of safety performance is determined by safety leadership.
- Daniel (2018) : Determined that the OHS program factors have an influence on reducing the accident rate
- Arga, Nugroho RE (2021): The OHS work program has a positive and significant impact on safety performance.
- Winda at al.(2018): There is a significant influence between the application of risk management and occupational safety and health
- Gehad at al. (2020): A good work safety system places leading (proactive) and lagging (reactive) indicators as important elements to monitor performance results or safety performance

Sutawidjaya A., Nugroho RE (2015), Uji Dimensi adalah untuk menggambarkan hubungan antar dimensi pada semua variable X terhadap Y, sebagai dasar analisa kuat atau lemahnya instrument yang dibuat dari penelitian

Research problems are as follows below:
1. Is there a positive and significant influence between safety leadership on safety performance at PT.XYZ?
2. Is there a positive and significant influence between the achievement of the OHS work program on safety performance at PT.XYZ?
3. Is there a positive and significant influence between risk management on safety performance at PT.XYZ?
4. Is there a simultaneous influence between safety leadership, OHS work programs and risk management on safety performance at PT.XYZ?

The objectives of the research are as follows below:

1. to know the positive and significant influence between safety leadership on safety performance at PT.XYZ?
2. to know the positive and significant influence between the achievement of the OHS work program on safety performance at PT.XYZ?
3. to know the positive and significant influence between risk management on safety performance at PT.XYZ?
4. to know the simultaneous influence of safety leadership, OHS work programs and risk management on safety performance at PT. XYZ.

II. LITERATURE REVIEW

As for some studies / reviews of the literature related to the problem are as follows:

- Anita Dewi (2012), according to the Occupational Safety Health Administration (OSHA) the notion of OHS (occupational health and safety) is the application of knowledge in studying human and property safety risks, both in industry and not.
- Gunawan F.A (2013) Safety Leadership is an ability possessed by a leader to move members of the organization to be enthusiastic in controlling work and operational risks, so that adverse incidents (humans, property and the environment) can be prevented.
- Wu at al., (2018) stated that safety leadership is measured through three dimensions, namely: concern for work safety (safety caring), guidance on work safety (safety coaching), and control of work safety (safety controlling).
- (ISO 45001, 2018) The organization must establish OSH objectives and programs at the relevant functions and levels in order to maintain and improve the OHS management system and performance on an ongoing basis).
- Nugroho RE (2021) defines risk as the possibility of a substance, activity, or process causing harm. Risks can be reduced and hazards controlled by good management. ISO 45001 (2018) related to the overall risk of an organization's business activities is carried out using the HIRADC (Hazard Identification Risk Assessment and Determining Control) method. OSHA 3671 (2002), for detailed risk analysis, each stage of work is carried out using the JHA (Job Hazard Analysis) method.
- ISO 45001 (2018), Safety Performance is a measurable result (performance) related to the influenceiveness (the extent to which planned activities are realized and planned results) in preventing injury and ill health in workers and providing a safe and healthy workplace. Referring to the OSHA 3970 (2019) standard, the measurement of Safety Performance can be done with 2 (two) indicators, namely leading (proactive) and lagging (reactive) indicators.

The 25 journals used as research references are:

- 7 (seven) research related to the influence of safety leadership on safety performance
- 12 (twelve) research related to the influence of OHS work programs on safety performance
- 4 (four) research related to the influence of risk management on safety performance
- 2 (two) research related to safety performance indicators with Leading (proactive) and lagging (reactive) indicators.

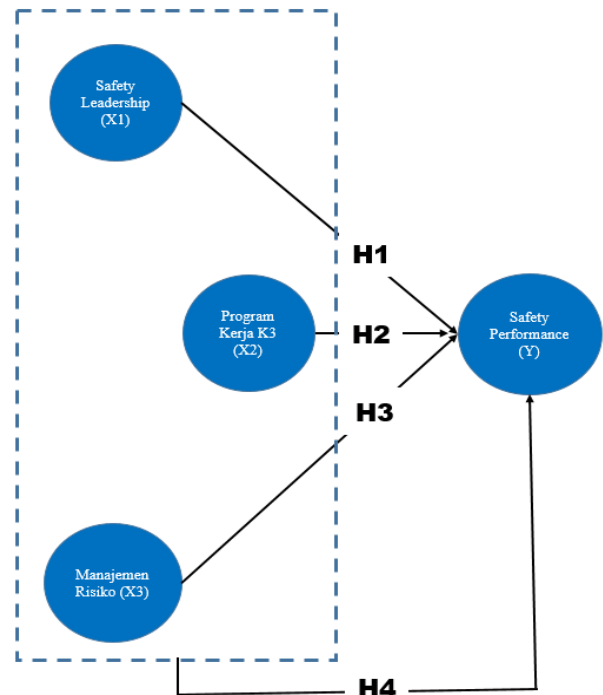Hypothesis development in this study:

Fig 2:- Hypothetical thinking
Data : Processed by Author (2022)

Several hypotheses can be established as follows:

- Hypothesis 1: it is suspected that there is a positive and significant influence between the safety leadership variable (X1) on safety performance (Y)
- Hypothesis 2: it is suspected that there is a positive and significant influence between the OSH work program variables on Safety Performance (Y)
- Hypothesis 3: it is suspected that there is a positive and significant influence between risk management variables on safety performance (Y).
- Hypothesis 4: it is suspected that there is a simultaneous influence between the safety leadership variables, OHS work programs and risk management on safety performance (Y).

III. METHODOLOGY

The author chose to use quantitative methods and statistical analysis in this study. Where the quantitative method can be defined as a research method based on the philosophy of positivism, used to examine certain populations or samples, data collection using research instruments, and quantitative data analysis. With the aim of testing the established hypothesis.
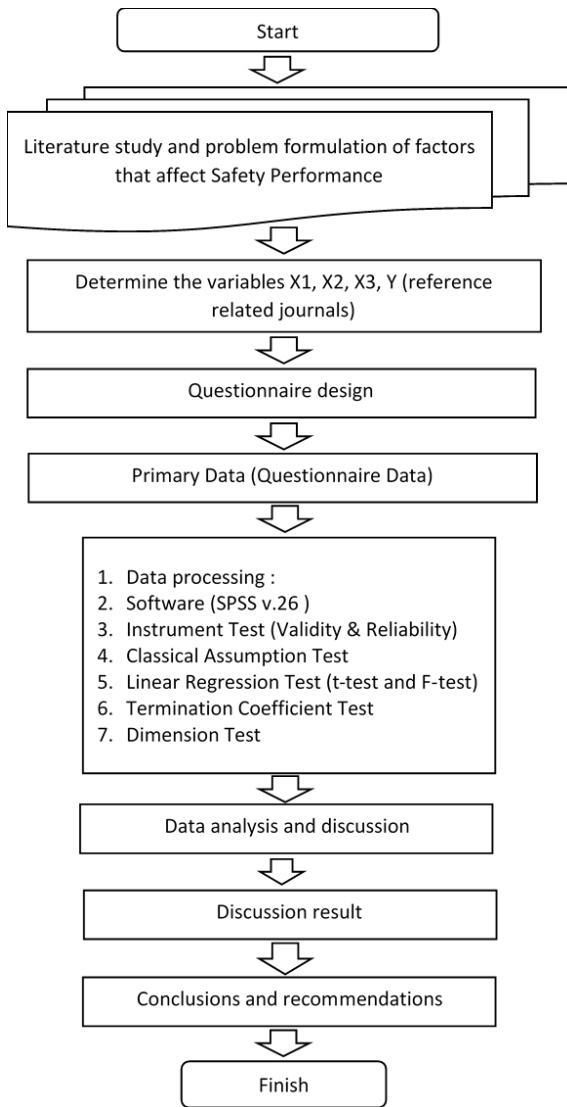
The research flow is as follows below:

Fig 3:- Research Flow
Source: Processed by Researchers (2022)

➢ *Variable narrative definition:*

In this study there are 2 (two) types of variables, namely the independent variable (independent) and the dependent variable (dependent).

The independent variables used are the following below:

- Safety Leadership (X1): Gunawan F.A (2013) An ability possessed by leaders to mobilize organizational members, to be enthusiastic in efforts to control work and operational risks, so that adverse incidents (humans, property and the environment) can be prevented.
- OHS Work Program (X2): Prasetyo (2019) explained that some parts of the Occupational Safety and Health (OHS) work program can be implemented, but the work program is made according to the problems that exist in an organization.
- Risk Management (X3): (ISO 31000, 2018) is part of governance and leadership, and is the basis of how organizations are managed at all levels. This contributes

to the improvement of the occupational safety and health (OHS) management system.

The dependent variable used is the following below:

- Safety Performance (Y): Wu, at. al (2018) Safety Performance is a performance of activities carried out by an organization to ensure work safety in an organization

➢ *Operational variables used are as follows:*
1. Variable X1-Safety Leadership:
- Safety Caring
- Safety Coaching / Involve
- Safety Appreciation
- Safety Control
2. Variable X2-OHS Work Program
- Work Procedures (OHS)
- OHS training
- OHS communications and information
- Hazard monitoring program
- Emergency response
- Accident reporting
- Compliance audit
3. Variable X3-Risk Management
- Level 1 Risk Management
- Level 2 Risk Management
- Hazard Identification and Risk Control
- Follow-up Risk Management
4. Variable Y-Safety Performance
- Lagging Indicator _Accident rate
- Leading Indicator

Sample and population: The research sample population at PT.XYZ is all levels of employees. The number of samples refers to the Slovin formula with a population of 132, so the number of samples taken is 100 people.

➢ *Method of collecting data :*
1. Primary Data, is data that will be obtained from the results of questionnaires that have been filled in by the participation of employees of all levels at PT. XYZ with a Likert scale, namely:
- Strongly agree with a score of 5
- Agree with a score of 4
- Doubt with a score of 3
- Disagree with a score of 2
- Strongly disagree with a score of 1.
2. Secondary Data, is data obtained based on literature studies and references to existing previous studies as well as company history data at PT.XYZ

➢ *Analysis Method:*

There are two things the analysis used is as follows:
1. Multiple Linear Regression with the formula:
$Y = a + b1X1 + b2X2 + b3X3$
The SPSS program performs a t-test (to determine the partial influence), the F-test to determine the simultaneous influence, and the coefficient to determine how strong the relationship between X and Y is.
2. Correlation between variable dimensions Namely X1Y1, X1Y2, X3Y1 X2Y2, X2Y2, X3Y2, etc.

IV. RESULT AND DISCUSSION

The process of business activities and functions is as follows:

Fig 4:- Activity process flow at PT.XYZ
Source: company data (2022)

Variable Description:

Variabel	Jumlah	Min-Maks	Mean	Median	Standard Deviasi	95% Confident Interval (CI) Mean
Safety Leadership	100	16 - 20	18,33	19,00	1,688	18,00 -18,66
Program kerja K3	100	26 - 35	31,39	31,00	2,926	30,81-31,97
Manajemen Risiko	100	15 - 20	17,87	17,00	1,873	17,50 -18,24
Safety Performance	100	6 - 10	8,82	9,00	0,925	8,64 - 9,00

Table 1:- Descriptive of all variables
Source of data processed by the author of SPSS (2022)

Test the validity and reliability of the instrument:
- Validity Test: All r count > r table 5%(100) on all questions. So that the question instrument is valid.
- Reliability test: obtained the value of the reliability coefficient (alpha) on all variables > r table (0.195). it can be concluded that all the questionnaires in this study are reliable or consistent.

So it can be used as a research instrument.

➢ *Classic assumption test.*
1. Normality Test: One sample Kosmogorov Smirnov test obtained p-value (asymp.Sig 2 tailed) 0.000 (0.000 > 0.005), so it can be concluded that the regression model has met the assumption of normality.
2. Linearity Test: Obtained p-value linearity (sig) 1,000 > 0.05 so it can be concluded that there is a linear relationship between the independent variable and the dependent variable.
3. Multicollinearity Test: The VIF value for all independent variables is less than 10, which means that the independent variables are multicollinearity
4. Heterocodastisity test: Sig value of safety leadership variable is 0.612, OHS work program is 0.423 and Risk Management is 0.166, so it is greater than 0.05. So it can be concluded that there is no heterocodastisity problem

➢ *Multiple Linear Coefficients :*

Coefficients^a					
Model	Unstandardized Coefficients B	t	Sig.	Nilai Signifikan	Hasil
1 (Constant)	0,602	0,928	0,356	> 0.05	tidak signifikan
Safety Leadership (X1)	0,146	2,813	0,006	< 0.05	signifikan
Program Kerja K3 (X2)	0,074	2,432	0,017	< 0.05	signifikan
Manajemen Risiko (X3)	0,178	5,298	0,000	< 0.05	signifikan

a. Dependent Variable: Safety Performance (Y)

Table 2:- Result of Multiple Linear Regression
Source of data processed by the author of SPSS (2022)

Based on the table above, the multiple linear regression equation is as follows:

$$Y = 0.602 + 0.146\ X1 + 0.074\ X2 + 0.178\ X3$$

From the above equation, the multiple linear regression coefficient above can be interpreted as follows:
- The constant coefficient is positive and not significant, stating that assuming the absence of the Safety Leadership (X1), OHS Work Program (X2), and Risk Management (X3) variables, the consistent value of Safety Performance (Y) is 0.602. And no significant influence on Safety Performance.
- The regression coefficient is positive and significant for Safety Leadership (X1), stating that Safety Leadership (X1) assuming no other independent variables, then if there is an additional 1% Safety Leadership (X1), then Safety Performance (Y) will increase by 0.146.
- The regression coefficient is positive and significant for the OHS Work Program (X2), stating that the OHS Work Program (X2) assuming no other independent variables, then if there is an additional 1% of the OHS Work Program (X2), then Safety Performance (Y) will increase by 0.074.
- The regression coefficient is positive and significant to Risk Management (X3), stating that Risk Management (X3) assuming the absence of other independent variables, then if there is an addition of 1% Risk Management (X3), then Safety Performance (Y) will increase by 0.178

➢ *Simultaneous Influence Test with SPSS F-Test:*

ANOVA^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	54,367	3	18,122	57,941	.000^b
Residual	29,714	95	0,313		
Total	84,081	98			

a. Dependent Variable: Safety Performance (Y)
b. Predictors: (Constant), Manajemen Risiko (X3), Safety Leadership (X1), Program Kerja K3 (X2)

Table 3:- Results of Anova Analysis (F-test)
Source of data processed by the author from SPSS (2022)

In table above, it shows that:
- F count of 54,367 with Sig F of 0.000. than less than 0.05.
- The calculated F value is 54.367, which is greater than the F table, which is 2.70.
- If the calculated F value > F table or sig < 0.05, by entering the value obtained F arithmetic > F table, namely 54.367 > 2.70 or significant 0.000 < 0.05, it can be concluded that if Safety Leadership (X1) , OHS work program (X2), and Risk Management (X3) carried out simultaneously will have a "significant influence" on Safety Performance at PT. XYZ simultaneously.

➢ *Partial Influence Test with SPSS t-test:*

Coefficients[a]

Model		Unstandardized Coefficients B	t	Sig.	Nilai Signifikan	Hasil
1	(Constant)	0,602	0,928	0,356	> 0.05	tidak signifikan
	Safety Leadership (X1)	0,146	2,813	0,006	< 0.05	signifikan
	Program Kerja K3 (X2)	0,074	2,432	0,017	< 0.05	signifikan
	Manajemen Risiko (X3)	0,178	5,298	0,000	< 0.05	signifikan

a. Dependent Variable: Safety Performance (Y)

Tabel 4:- T- test results analysis
Source of data processed by the author from SPSS (2022)

The table above shows that:
a. Safety Leadership (X1) has a value of t arithmetic > t table that is 2.813 > 1.988, or a Sig value of 0.006 < 0.05, it can be concluded that the Safety Leadership variable (X1) has a positive and significant influence on the Safety Performance (Y) variable.
b. The OHS Work Program (X2) has a t count > t table which is 2.432 > 1.988, or a Sig value of 0.017 <0.05, it can be concluded that the Safety Leadership variable (X1) has a positive and significant influence on the Safety Performance (Y) variable.
c. Risk Management (X3) has a value of t arithmetic > t table that is 5.298 > 1.988, or a Sig value of 0.000 <0.05, it can be concluded that the Safety Leadership variable (X1) has a positive and significant influence on the Safety Performance (Y) variable.

➢ *Dimension Analysis*
To describe the relationship between dimensions as a basis for analyzing the strength or weakness of the instrument made from the research.
a. For the Safety Leadership variable, in general, each dimension relates to "Sufficiently Strong". The smallest correlation value in Safety Caring to the leading Indicator
b. For the OHS Work Program variable, all dimensions are related to "Strong Enough", as for the Accident Reporting dimension related to the Lagging Indicator because it has a coefficient value of 599 the calculated r value is greater than the r table of 0.195 with n 100 for that it can be stated dimensions' accident reporting is closely related to the lagging indicator dimension (having a "Sufficiently Strong" relationship).
c. For the Risk Management variable, some dimensions are strongly related to the lagging indicator dimension and some are very strongly related to the leading indicator dimension. The strongest dimension is Hazard Identification and Risk Control (X3.3) which relates to the

Leading Indicator (Y1) dimension on the safety performance variable, because the Level 1 Risk Management dimension has a coefficient = 714. The calculated r value is greater than the r table of 0.195. , while the dimension of Hazard Identification and Risk Control (X3.3) is = 689 which is greater than r table 0.195 with n 100, for that it can be stated that the Level 1 Risk Management dimension and also the dimensions of Hazard Identification and Risk Control are closely related to Safety Performance (have a "Very Strong" relationship).

V. RESULT AND IMPLICATION

Based on the results of the analysis using SPSS, the next researcher will discuss the analysis that has been done. This study was conducted to determine the influence of safety leadership, OHS work program and risk management on safety performance. To determine the influence, then testing the hypothesis so that it can be seen the influence of one variable on other variables.

1. Safety leadership variable on safety performance.
Hypothesis 1 (H1): It is suspected that there is a positive and significant influence between the safety leadership variable (X1) on safety performance (Y). Based on the results of the research analysis, it can be described as follows:
a) The positive and significant influence of Safety Leadership is proven by testing the hypothesis with a t count > t table that is 2.813 > 1.988, or a Sig value of 0.006 < 0.05.
b) The correlation between the safety leadership variable (X1) and the safety performance variable is 0.472. It is the smallest correlation variable compared to X2 and X3, but is still included in the category of "strong enough" relationship level.
c) The highest correlation between dimensions is safety appreciation of the leading indicator (safety performance) of 0.676, and the lowest dimension of correlation of safety caring to the leading indicator is 0.430.

Based on the analysis of the 3 (three) points above, it can be interpreted that:
a) Safety leadership has a positive and significant influence on safety performance, with a correlation level of a "quite strong" relationship, for that the company must manage and run programs that exist on the safety leadership variable to get good safety performance results. The safety leadership programs include safety caring, coaching, safety controlling and safety appreciation.
b) The Appreciation dimension is the most highly correlated, so companies must place this as an important part of what safety leadership is. Regarding safety appreciation, the company has implemented several initiatives, including:
- Rewards for achieving safe working days for a certain number such as 250 days, 450 days, etc.
- Safety Champion (Exemplary) every month in all projects.
- Reporting on the best individual Hazob (Hazard Observation) and BBS (Behaviour based Safety) programs

c) But no less important is safety caring, even though with the lowest correlation level, it requires active and direct care and involvement in the ranks of Managers to carry out K3 management within the scope of their responsibilities. Activities currently implemented include attending to make OSH policy policies, attending OHS meetings, field visits, being involved in accident investigations, giving OHS briefings, etc.

2). K3 work program variables on safety performance

Hypothesis 2 (H2): It is suspected that there is a positive and significant influence between the K3 Work program variables on Safety Performance (Y).

Based on the results of the research analysis, it can be described as follows:

a) the positive and significant influence of the K3 Work Program is evidenced by testing the hypothesis with a t count > t table that is 2.432 > 1.988, or a Sig value of 0.017 <0.05.

b) The correlation between the K3 work program variables (X2) and the safety performance variable is 0.710. It is the "largest" correlation variable compared to the X1 and X1 variables, with the category "strong" correlation level.

c) The highest correlation between dimensions is the K3 work program on lagging indicators on safety performance of 0.599, and the lowest correlation of dimensions on OHS training dimensions on leading indicators on safety performance is 0.466.

Based on the analysis of the 3 (three) points above, it can be interpreted that:

a) The OSH work program has a positive and significant impact on safety performance, with a "strong" correlation level, and the highest correlation compared to other variables. So the company must properly manage and run the existing programs on the work program variables to get good safety performance results.

b) The dimension of accident reporting on lagging indicator is the highest correlation. The company must manage that the slightest accident that occurs must be reported to take corrective action. Activities carried out by the company related to the dimensions of accident reporting include:

- Accident reporting procedures have been created and accessed in the management system
- Procedure socialization is carried out for related parties
- Accident investigation exercises are practiced to increase skills
- Investigations are led by supervisory level, and managerial level is still rarely involved in accident investigations.

c) Dimensions of K3 training have the lowest correlation level on the K3 work program variables. However, the company should not ignore it, because the K3 program variable has the highest correlation. K3 training is planned, but not all of it is carried out as planned, so the progress of achievement is low. Evaluation of the OHS training plan, according to what must be carried out.

3). Risk management variables on safety performance

Hypothesis 3 (H3): It is suspected that there is a positive and significant influence between Risk Management variables on Safety Performance (Y).

Based on the results of the research analysis, it can be described as follows:

a) the positive and significant influence of Risk Management is proven by testing the hypothesis with a t count > t table that is 5.298 > 1.988, or a Sig value of 0.000 <0.05.

b) The correlation between the risk management variable (X3) and the safety performance variable is 0.704, with the category of correlation level "strong". The correlation value is greater than the X1 variable, but smaller than the X2 variable.

c) The highest correlation between dimensions is on the risk management dimension level of 0.714, and the lowest dimension correlation of level 2 risk management on lagging indicators on safety performance is 0.466.

Based on the analysis of the 3 (three) points above, it can be interpreted that:

a) Risk management has a positive and significant influence on safety performance, with a "strong" correlation level. The correlation value of the relationship is greater than the safety performance variable, but smaller than the K3 work program variable. So the company must properly manage and run existing programs on risk management variables to get good safety performance results.

b) The dimension of risk management level 1 on leading indicators has the highest correlation value of 0.714. In this case, the company must implement level 1 risk management, namely the HIRADC (Hazard Identification, Risk Assessment & Determining Control) method in the company. The things that were initiated from this application were

- The list of hazards and risks has been carried out, but does not cover all activities in accordance with the business process
- Implementation of risk management is carried out by Supervisor with K3
- Follow-up on new hazard control is carried out for high and medium risk levels, but for low ones it is not controlled
- There has not been a regular update in accordance with changes in the process or in the event of an accident.

c) The risk management follow-up dimension has the lowest correlation level on the risk management variable, with a "strong" correlation level. This has become neglected by the company, after identifying, assessing risk, and following up on the most important risk control. Follow-up is not only on high risk, but also for medium and low categories that must be controlled until the level of danger is still tolerable to work safely. For this reason, the company must make follow-up monitoring in accordance with the plans and targets set for its completion.

4). Hypothesis 4 (H4): It is suspected that there is a positive and significant influence between the safety leadership variables, K3 work programs and risk management simultaneously on safety performance.

Based on the results of the study, the simultaneous positive and significant influence on safety leadership, K3 work programs and Risk Management was proven by hypothesis testing with the calculated F value > F table, namely 54.367 > 2.70, or Sig value 0.000 <0.05.

So the company must run together all safety leadership variables, K3 programs and risk management to be able to achieve good safety performance.

➢ *Comparison of previous research*

Peneliti	Safety Leadership (X1)	Program Kerja K3 (X2)	Manajemen Risiko (X3)	Safety Performance (Y)
Hasil Peneliti (2022)	√	√	√	√
Beatriz Fernandez-Muniz (2014)	√	--	√	√
Natalie C. Skeepers (2015)	√	√	--	√
Yovita Vanesa Romuty (2017)	√	--	--	√
Kartika Rahayu (2017)	√	√	--	√
Tsung-Chih Wu (2017)	√	√	--	√
Daniel Wynalda (2018)	--	√	--	√
Arga Santoso, Rosalendro Eddy Nugroho (2021)	√	√	--	√
Elva Susanti (2019)	--	√	√	√
Herry Supriyatna (2020)	√	--	√	√
Sesuai / Gap	Sesuai	Sesuai	Sesuai	Sesuai

Table 5:- Comparison of Previous Research
The source of the data is processed by the author (2022)

➢ *Implications for the Company*
Several things that have been improved as a result of the research implications include:
a) Safety Caring: The OHS program is part of the responsibility of the Manager of each department. Managers consistently monitor the achievements of the OHS program on a daily basis.
b) OHS training: Evaluation of the OHS training plan, as required to be implemented.
c) Follow-up Risk Management: Follow-up is done until the risk of harm is low.
- Lagging Indicator: The number of accidents from 2022 to June is 3.2 (relatively decreased)
- Leading Indicator: More than 100% of the implementation of the OHS program has been achieved.

VI. CONCLUTIONS AND RECOMMENDATIONS

A. Conclusion:
Based on the results of research and discussion of hypothesis testing about the influence of safety leadership, OHS work program, and risk management on safety performance at PT.XYZ
1. Safety leadership has a positive and significant influence on safety performance. The correlation between the safety leadership variable and safety performance has the smallest value compared to the two variables (OHS work program and risk management), but is still in the "strong enough" category. The dimension of safety appreciation has the strongest influence and the dimension of safety caring has the lowest influence.
2. The OHS work program has a positive and significant impact on safety performance. The correlation between the OHS work program variables and safety leadership with the highest value in the "strong" category. The dimension of accident reporting has the strongest influence and the dimension of OHS training has the least influence.

3. Risk management has a positive and significant influence on safety performance. The correlation between risk management variables and safety performance is in the "strong" category. The dimension that has the strongest impact on the implementation of level 1 risk management and the dimension of risk management follow-up has the lowest influence.
4. Simultaneously, safety leadership, OHS work program, and risk management on safety performance have a positive and significant influence.

B. Recommendations:
Based on the research results obtained, the authors propose several suggestions that are expected to be input for the company in relation to improving safety performance in order to reduce the number of accidents are as follows:
1. Variable Work Program on the dimensions of accident reporting on lagging indicators with the "highest" correlation value with the level of "strong" relationship. The company must manage that the slightest accident that occurs must be reported to take corrective action. By making easy guidelines and provisions that must be made and understood by employees in accident reporting, reporting is carried out as quickly as possible not exceeding work shifts (12 hours), managerial levels are involved in accident investigation and analysis, root causes and corrective actions must be appropriate to prevent recurrence. , and communication to all employees is necessary for learning action
2. The risk management variable on the level 1 risk management implementation dimension has the second highest correlation value with the level of "strong" relationship. So the company must implement level 1 risk management properly. What is initiated from this application is that risk management is applied to all existing activities in accordance with the company's business processes, implementation is carried out involving all interested parties including the implementing level, follow-up must be carried out to control activities from high risk to low risk, and updates are carried out regularly. periodically in accordance with process changes or in the event of an accident.
3. The safety leadership variable in the safety appreciation dimension has the highest correlation, so companies must place this as an important part of what safety leadership is to get a good safety performance. This is done by creating initiatives and programs to appreciate the performance of OHS either individually or in sections to get a good safety performance. This safety appreciation can be applied for example: individual and best departmental Safety performance awards, employee salary incentives for achieving the zero accident target, awards for employees who contribute to the best or most hazard findings and recommendations for improvement, and 5R program performance awards.

REFERENCES

[1]. Agustina, Chahyadhi, Ardyanto. (2018). Hubungan Safety leadership dengan Safety Performance pada pekerja pakan industry ternak Sidoharjo. *Preventia the Indonesian Journal of Public Health*

[2]. Amirin, T., 2011, Populasi Dan Sampel Penelitian 4: Ukuran Sampel Rumus Slovin, Erlangga, Jakarta.

[3]. Amir Mohammadi at. al. (2018). *Factors infuecing safety performance on construction projects: A review. Published by Elsevier Ltd*.

[4]. Anita Dewi PS. (2012). Dasar Dasar Keselamatan dan Kesehatan Kerja. UPT Penerbitan. UNEJ

[5]. Beatriz Fernandez-Muniz at. al. (2014). *Safety leadership, risk management and safety performance in Spanish firms. Published by Elsevier Ltd.*

[6]. Blanchard, Ken & Hersey, Paul, 1995. Manajemen Perilaku Organisasi: Pendayagunaan Sumber Daya Manusia, Alih Bahasa: Agus Dharma, Jakarta: Penerbit Erlangga.

[7]. D.A. Patel and K.N. Jha. (2016*). Structural Equation Medeling for relationship based determinants of safety performance in the construction projects. Journal of Management in Engineering*; Volume (032):;issue: 006

[8]. Wynalda D. Sulistio H. (2018). Analisis Korelasi Faktor-faktor Penerapan OHS terhadap tingkat Kecelakaan dan Tingkat Keparahan pada Proyek Konstruksi. Jurnal Mitra teknik Sipil Untar

[9]. Susanti E. Sugianto W. at. a. (2019). Analisa Pengaruh Manajemen Resiko dan Perilaku Kerja Aman Terhadap Kinerja Pekerja Shipyard Kota Batam. Prosiding Seminar Nasional Ilmu Sosial dan Teknologi (SNISTEK).

[10]. Chua Jing Lun, Shah Rollah Abdul Wahab (2017). *The influences of safety leadership on safety performance in Malaysia. Saudi Journal of Business and Management Studies*

[11]. Rusdiana FE. (2020). *Safety Leadership dan Safety Performance* Karyawan. Fakultas Psikologi Universitas 17 Agustus 1945 Surabaya.

[12]. Frank Bird Jr. (1990). *Practical Loss Control Leadership.* International Loss Control Institute (ILCI).

[13]. Gehad Mohammed Ahmed Naji at.al. (2020). Implementation leading and lagging indicator to improve safety performance in the upstream oil and gas industry. Journal of Critical Reviews. Vol 7, Issue 14.

[14]. Hair, J.F. Jr., Black, W.C., Babin, B.J., Anderson, R.E. (2006), Multivariate Data Analysis. 7st ed. England: Pearson Education Limited

[15]. Supriyatna H. Nugroho RE.(2020). Analisa pengaruh penerapan faktor faktor sistem keselamatan dan kesehatan kerja terhadap produktifitas pekerja pada pekerjaan fit out mall di DKI Jakarta. Syntax Literate : Jurnal Ilmiah Indonesia p–ISSN: 2541-0849

[16]. Husein Umar. 2008. Metode Penelitian untuk skripsi dan tesis bisnis. Jakarta, PT Raja Grafindo Persada

[17]. Rahayu K. Sari TP (2017). Analisa faktor yang mempengaruhi safety performance dengan metode PCR dan NIPALS. POLITEKNOSAINS, Vol. XVI. Universitas Nusantara Kediri.

[18]. Wijaya, Prabowo, at al. (2019). Faktor-faktor yang Mempengaruhi Safety Performance pada Proyek Konstruksi Bangunan Tinggi. Journal Dimensi Pratama Teknik Sipil. Universitas Kristen Petra Surabaya.

[19]. Santoso A., Nugroho RE. (2021). Pengaruh Program kerja OHS, Penyebab pembelajaran kecelakaan kerja, Budaya/iklim kerja dan kompetensi terhadap Safety Performance di Perusahaan PT. XYZ. Universitas Mercu Buana

[20]. Mohanad K, Buniya, at. al. (2020). Barrier to safety program implementation in construction industry. Ain Shams Engineering Journal

[21]. Mohanad Kamil Buniya at. al. (2021). Idris Othman, Riza Yosia Sunindijo, Ghanim Kashwani. 2021. *Critical Success Factors of Safety Program Implementation in Construction Projects in Iraq. Publisher by MDPI*

[22]. Natalie C. Skeepers, Charles Mbohwa. (2015). *A study on the leadership behavior, safety leadership and safety performance in the construction industry in South Africa. Published by Elsevier Ltd*.

[23]. Reza Indradi Putera, Sri Harini. (2017). Pengaruh keselamatan dan Kesehatan kerja (OHS) terhadap jumlah penyakit kerja dan jumlah kecelakaan karyawan pada PT. Hanei Indonesia. Jurnal Visionida.

[24]. Oktavianus R, Nugroho RE 2021. *Influence of the Implementation of Occupational Health, Safety, and Regulation on Employee's Performance of Contractor Companies in Jakarta. International Journal of Research and Review.*

[25]. Nugroho RE. (2021). Pengenalan dan Aplikasi Penelitian Sosial & Bisnis Menggunakan SPSS. Penerbit Adhi Sarana Nusantara

[26]. Sutawidjaya A., Nugroho RE (2015). Memahami penulisan ilmiah dan metodologi penelitian. 2015. LP2S

[27]. Supardi S, Grahita Chandrarin, Sunardi. (2021). *The roles of Safety leadership and Safety Culture to improving Safety Performance.* East African Scholars Journal of Economics, Business and Management

[28]. Terje Aven (2015). *Risk assessment and risk management: Review of recent advances on their foundation. Published by Elsevier Ltd.*

[29]. Tsung-Chih Wu, Chi-Hsiang Chen, Chin-Chung Li (2017). *A correlation among safety leadership, safety climate and safety performance. Published by Elsevier Ltd.*

[30]. Wei Tong Chen at. al. (2020). *Construction Safety Success Factors: A Taiwanese Case Study. Publisher by MDPI*

[31]. Wu, T, Chen, C & Li, C. (2008). A Correlation Among Safety Leadership, Safety Climate, and Safety Performance. Journal of Loss Prevention in the Process Industries, vol. 21.

[32]. Yovita Vanesa Romuty, herry Pintardi Chandra, dan Paulus Nugraha. (2017). Model Pengaruh Safety managemen dab Safety Leadership terhadap Safety performance pada proyek konstruksi Surabaya. Jurnal Universitas Kristen Petra.

[33]. Yusuf Latief, at. al. (2017). Understanding the relationship between safety culture dimensions and safety performance of construction project through Partial Least Square Method. Teknik Sipil FTUI.